**Program 1:**

r = lambda q: q \* 2

s = lambda q: q \* 3

x = 2

x = r(x)

x = s(x)

x = r(x)

print (x) ans. 24

**Program 2:**

a = 4.5

b = 2

print(a//b) ans.2.0

**Program 3:**

a = True

b = False

c = False

if a or b and c:

    print("NARESHiTECH") ans.

else:

    print("nareshitech")

**Program 4:**

a = True

b = False

c = False

if not a or b:

    print(1)

elif not a or not b and c:

    print(2)

elif not a or b or not b and a:

    print(3)

else:

    print(4)

ans. 3

**Program 5:**

count = 1

def doThis():

    global count

    for i in (1, 2, 3):

        count += 1

doThis()

print(count) ans.4

**Program 6:**

for i in  range(2):

    print(i)

for i in range(4,6):

    print(i) ans.0 1 4 5

**Program 7:**

values = [1, 2, 3, 4]

numbers = set(values)

def checknums(num):

    if num in numbers:

        return True

    else:

        return False

for i in  filter(checknums, values):

    print(i) 1 2 3 4

**Program 8:**

counter = {}

def addToCounter(country):

    if country in  counter:

        counter[country] += 1

    else:

        counter[country] = 1

addToCounter('INDIA')

addToCounter('Japan')

addToCounter('INDIA')

print (len(counter)) ans.2

**Program9:**

a = "NareshIT "

b = 13

print (a + b) ans.type error becoz var and int cannot be added

**Program10:**

dictionary = {}

dictionary[1] = 1

dictionary['1'] = 2

dictionary[1] += 1

 sum = 0

for k in dictionary:

    sum += dictionary[k]

print(sum)  ans.4

**Program 11:**

dictionary = {1:'1', 2:'2', 3:'3'}

del dictionary[1]

dictionary[1] = '10'

del dictionary[2]

print(len(dictionary)) ans.2

**Program:12**

nameList = ['Harsh', 'Pratik', 'Bob', 'Dhruv']

print(nameList[1][-1]) ans.k

**Program 13:**

nameList = ['Harsh', 'Pratik', 'Bob', 'Dhruv']

pos = nameList.index("NareshIT")

print(pos \* 5) ans. NareshIT not in list so not mentioned.

**Program 14:**

Codes = [1, 2, 3, 4]

Codes.append([5,6,7,8])

print(len(Codes)) ans. 5 becoz this is considered as 1 only and list can append only one char. at a time.

**Program 15:**

list1 = ['physics', 'chemistry', 1997, 2000]

list2 = [1, 2, 3, 4, 5, 6, 7 ]

print("list1[0]: ", list1[0]) physics

print("list1[0]: ", list1[-2]) 1997

print("list1[-2]: ", list1[1:]) chemistry,1997,2000

print("list2[1:5]: ", list2[1:5]) 2,3,4,5

**Program:16**

list1 = ['physics', 'chemistry', 1997, 2000]

print("list1[1][1]: ", list1[1][1]) h

print("list1[1][-1]: ", list1[1][-1])y

**Program:17**

list1 = [1998, 2002, 1997, 2000]

list2 = [2014, 2016, 1996, 2009]

print("list1 + list 2 = : ", list1 + list2) [1998, 2002, 1997, 2000, 2014, 2016, 1996, 2009]

print("list1 \* 2 = : ", list1 \* 2)  [2014, 2016, 1996, 2009, 2014, 2016, 1996, 2009]

**Program:18:**

list1 = range(100, 110) #statement 1

print("index of element 105 is : ", list1.index(105))  #statement 2 ans.5

**Program:19:**

list1 = [1, 2, 3, 4, 5]

list2 = list1

list2[0] = 0;

print("list1= : ", list1) #statement 2 ans.[0,2,3,4,5]

**Program:20**

var1 = 'Hello NareshIT!'

var2 = "NareshITHYD"

print("var1[0]: ", var1[0])        # statement 1 ans.h

print("var2[1:5]: ", var2[1:5])    # statement 2 ans.ares